

Date: Friday, 12/9/2005 12:06:25 PM
 User: Kim Johnston

Process Sheet

Customer : CU-DAR001 Dart Helicopters Services	Drawing Name : WEARPAD
Job Number : 25188	
Estimate Number : 10760	
P.O. Number : <u>N/A</u>	Part Number : D33403
This Issue : 12/9/2005 S.O. No. : <u>N/A</u>	Drawing Number : D3340 REV B
Prsht Rev. : NC	Project Number : N/A
First Issue : 12/9/2005 Type : PURCHASED PARTS	Drawing Revision : B
Previous Run : 24689	Material : <u>N/A</u>
Written By : <u>See comment below</u>	Due Date : 12/30/2005 Qty: 10 Um: Each
Checked & Approved By : <u>See comment below</u>	
Comment : Est: A 05.11.10 Preliminary issue AP/EC	

Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :
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1.0	PG	PURCHASING
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**Comment:** PURCHASINGIssue P/O: 00000257 05/12/12

Email or ship DXF file to vendore

Laser cut per Dwg D3340 flat pattern D3340-3

Material release note required

2.0	D33403F	Wearplate
-----	---------	-----------



Comment: Qty.: 1.0000 U(s)/Unit Total : 10.0000 U(s)
 Wearplate

3.0	PACKAGING 1	PACKAGING RESOURCE #1
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**Comment:** PACKAGING RESOURCE #1

Receive & Inspect For Transit Damage

Ensure material release note is attached

DL 05/12/30 10

4.0	QC6	DIMENSIONAL CHECK
-----	-----	-------------------

**Comment:** DIMENSIONAL CHECK

Inspect dimensions

06.01.05 8

PTO

5.0	BRAKE NC	NC BRAKE
-----	----------	----------

**Comment:** NC BRAKE

Deburr if necessary

Form on brake as per Dwg D3340 using Dt and DT

SB 06/01/05

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
06-01-05	4	Took 1 for template. Identify as DT 8833	<i>[Signature]</i>	06-01-05	1	<i>[Signature]</i> <i>[Signature]</i>	<i>[Signature]</i> 06-01-05

Part No: D3340-3 PAR #: Fault Category: Supplier Lazer Cut NCR: (Yes) No DQA: [Signature] Date: 06/01/16
 QA: N/C Closed: [Signature] Date: 06-01-16

NCR: <u>25/88</u>		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
06-01-05	4	Detail "D" holes out of alignment on 1 wear plate only. Holes too close to the edge on one side. Happened at laser cut.	<i>[Signature]</i> <i>[Signature]</i>	Scrap & destroy.	<i>[Signature]</i> 06-01-05	<i>[Signature]</i> 06-01-05	<i>[Signature]</i> <i>[Signature]</i>	<i>[Signature]</i> 06-01-05

NOTE: Date & initial all entries

Date: Friday, 12/9/2005 12:06:25 PM
User: Kim Johnston

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: WEARPAD

Job Number: 25188

Part Number: D33403

Job Number:



Seq. #:

Machine Or Operation:

Description :

6.0

QC5

INSPECT WORK TO CURRENT STEP



2006-07-05

Comment: INSPECT WORK TO CURRENT STEP

7.0

POWDER COATING

POWDER COATING



Comment: POWDER COATING

Powder Coat Grey Sandtex (Ref: 4.3.5.6) as per QSI 005 4.3

FC 060112

8.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

C20601113 8

9.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location: *61*

C20601113 8

10.0

DC

DOCUMENT CONTROL



Comment: DOCUMENT CONTROL

Inspection Level 21

06/01

Job Completion



u 0601.13 8

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

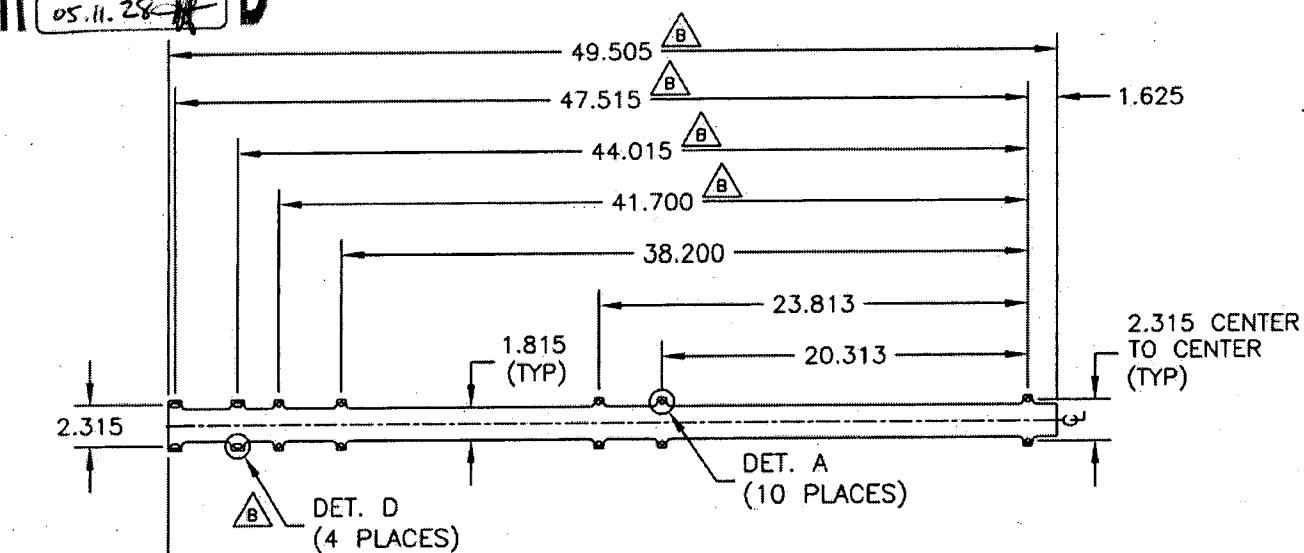
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

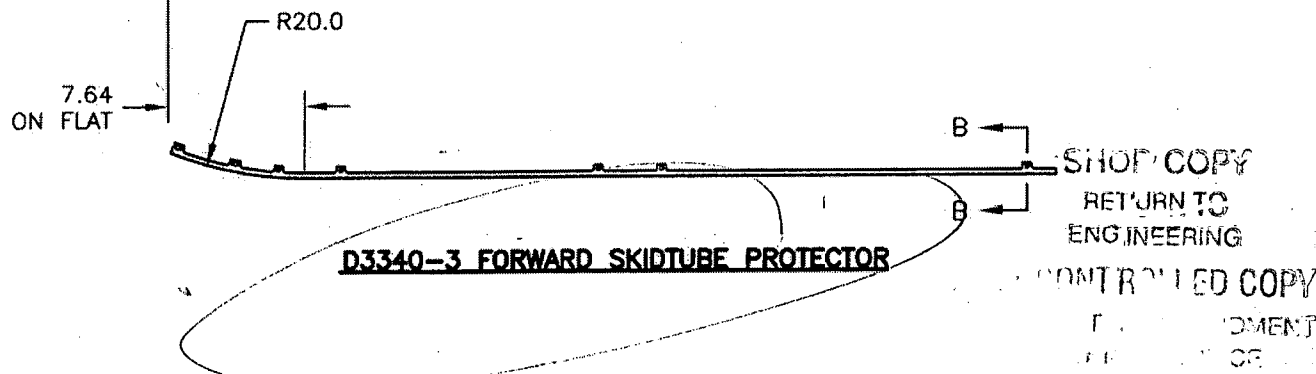


DESIGN MB	DRAWN BY MB	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D3340	REV. B SHEET 2 OF 11
DATE 05.11.22	TITLE SKIDTUBE PROTECTOR		SCALE 1:10

RELEASED
05.11.22



D3340-3F FLAT PATTERN



NOTES:

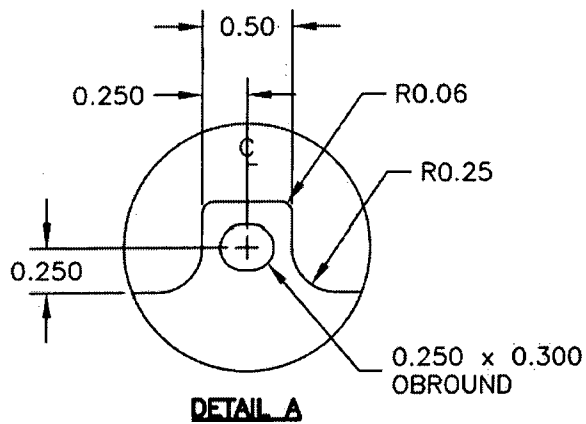
- 1) MATERIAL: AISI 1010-1025 OR ASTM A36/A366/A1008 OR CSA G40-21, 38W/44W/50W/60W/70W SERIES COLD ROLLED STEEL 19 GAUGE (0.040 THICK)
- 2) PART IS SYMETRICAL ABOUT CENTER LINE
- 3) FINISH: POWDER COAT GREY SANDTEX (REF. 4.3.5.6) PER DART QSI 005 4.3
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 5) ALL DIMENSIONS ARE IN INCHES
- 6) BREAK ALL SHARP CORNERS 0.063 MAX

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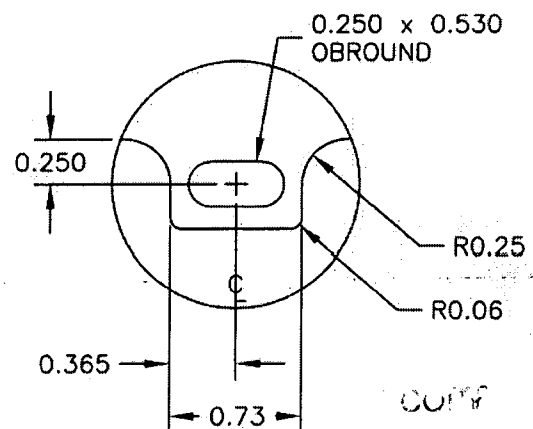
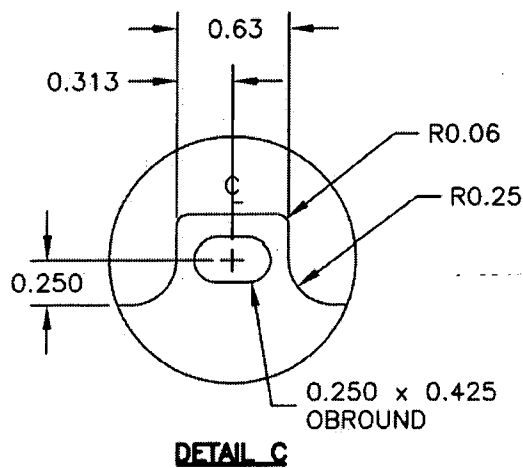
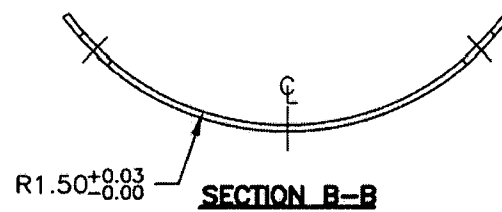
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DESIGN MB	DRAWN BY MB	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D3340	REV. B SHEET 11 OF 11
DATE 05.11.22		TITLE SKIDTUBE PROTECTOR	SCALE 1:1



RELEASED
05.11.28



COPY
TURN TO
ENGINEERING
TITLED COPY
T.T. AMENDMENT
CUT NOTICE

WORK ORDER
NO. 25188

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90229754 INSPECTION CERTIFICATEMATERIAL TEST/INSPECTION CERTIFICATES

YEH MAU CORP.
 YEN MAU CORP.

INVOICE NO.
 COMMODITY:

FORM 445
 PRIME COLD ROLLED STAINLESS STEEL SHEET AISI 304 NO.4 (SIC)
 FINISH WITH 100 MIC FILM ON MAIN SIDE, WITH BACK PASS,
 SLITTED EDGE AISI 304, 2B FINISH, WITH PAPER INTERLEAVED,
 SLITTED EDGE.
 AISI 304

SPECIFICATION:
 CUSTOMER:

INTEGRIS METALS LTD

工廠: 嘉華基港竹園路安地345號
 345, SHUN AN RD. LI CHU HSANG
 KAOHSUNG TAIWAN R.O.C.
 TEL: (87) 872885 FAX: (87) 873006
 CERTIFICATE NO: 9011192
 DATE OF ISSUE: 1/24/2004

(ITEM NO) SIZE	NO.	Weight (N.W.)		Heat No.	ID NO.	Physical Properties Tensile Test GL-50 mm					Chemical Composition (%)							
						Y.S. (N/mm ²)	T.S. (N/mm ²)	E.L. (%)	HRB	HV	C x100	Si x100	Mn x100	P x1000	S x1000	Ni x100	Cr x100	N x100
		KGS	LBS															
AISI 304 2B (7425-4228)	1	1,465	3,230	YU231320	3AS44453B-21	258	685	56	81	158	4.8	51	119	24	2	804	1821	2.7
24GA/48"X120"	1	1,464	3,228	YU231320	3AS44453B-22	258	685	56	81	158	4.8	51	119	24	2	804	1821	2.7
24GA/48"X120" (7425-5860)	1	1,464	3,228	YU230510	38S37809B-51	280	673	53	82	162	5.4	50	126	26	3	815	1819	2.4
22GA/48"X96" (7425-5851)	1	1,375	3,031	YU230510	38S37809B-52	280	673	53	82	162	5.4	50	126	26	3	815	1819	2.4
22GA/48"X120" (7425-5850)	1	1,445	3,186	YU134975	3AS43434A-1	312	666	51	82	161	4.1	49	112	24	2	809	1821	2.8
18GA/48"X96" (7425-2619)	1	1,497	3,300	YU231066	3AS42732-4	301	664	49	84	166	3.7	40	116	27	5	810	1824	3.7
18GA/48"X120" (7425-2619)	1	1,453	3,203	YU231066	3AS42732-5	301	664	49	84	166	3.7	40	116	27	5	810	1824	3.7
18GA/48"X120" (7425-5164)	1	1,423	3,137	YU231143	3AS42886A-6	302	650	53	82	159	4.5	52	123	28	4	810	1822	2.7
16GA/48"X120"	1	1,424	3,139	YU231143	3AS42886A-7	302	650	53	82	159	4.5	52	123	28	4	810	1822	2.7
16GA/48"X120" (7425-7049)	1	1,420	3,131	YU231143	3AS42886B-1	302	650	53	82	159	4.5	52	123	28	4	810	1822	2.7
16GA/48"X96" (7425-8053)	1	1,441	3,177	YU231075	3AS42917A-1	302	650	52	83	162	4.2	48	119	26	6	806	1813	3.4
16GA/48"X96" (7425-8053)	1	1,441	3,177	YU231075	3AS42917A-2	302	650	52	83	162	4.2	48	119	26	6	806	1813	3.4
14GA/48"X120"	1	1,420	3,131	YU231075	3AS42917A-3	302	650	52	83	162	4.2	48	119	26	6	806	1813	3.4
14GA/48"X120" (7425-8244)	1	1,420	3,131	YU231075	3AS42917A-4	302	650	52	83	162	4.2	48	119	26	6	806	1813	3.4
14GA/60"X96" (7425-8277)	1	1,446	3,188	YU135202	3AS45623A-211	301	641	53	81	157	5.1	51	114	30	9	806	1822	3
14GA/60"X120"	1	1,405	3,097	YU135202	3AS45623A-213	301	641	53	81	157	5.1	51	114	30	9	806	1822	3
14GA/60"X120"	1	1,540	3,395	YU135202	3AS45623A-214	301	641	53	81	157	5.1	51	114	30	9	806	1822	3

Remarks: NO MERCURY CONTAMINATION
 WE HEREBY CERTIFY THAT THE MATERIAL DESCRIBED HEREIN HAS
 BEEN MADE IN ACCORDANCE WITH THE RULES OF THE MILL CERTIFICATE.

Brand test good for all Heat NO.

PRODUCT IN ACCORDANCE WITH ASTM A240, A480,
 A362E, ASME SA340, Q35765D.

YEH MAU CORP.

in Kim Hing
 Manager of Quality Assurance Section

2094 304 4455
 (0.037)

po # 267 196

13



New Zealand Steel Limited
Glenbrook, South Auckland
Postal: Private Bag 92121, Auckland, New Zealand
Telephones: (09) 375 8996 / 375 8111 Auckland
(09) 235 8089 / 235 3535 Waiuku
Fax: (09) 375 8959

TEST CERTIFICATE

Ref: 5210/22495

CUSTOMER			Wilkinson			P50323 DI001			SPECIFICATION										ASTMA1008 CS Type A										CERTIFICATE No			TC112397		
CUSTOMER O/N			90-21N-686						PRODUCT										CRA WIDE COIL										PAGE			1 of 1		
MILL O/N			480737						DIMENSIONS										0.055" x 48" x Coil										DATE			09 June 2005		
PACK NUMBER	HEAT No	CHEMICAL COMPOSITION PERCENT															MECHANICAL TESTS (TEST SPECIFICATION -										ASTMA370							
		C	Si	Mn	P	S	Cu	Ni	Cr	Mo	V	Nb	Ti	Al	B	N2	CE()	BEND	YIELD	T.S.	%ELONG	HARDNESS	r	LENGTH										
		x100					x1000										x10000		x100		180°			G.L.=	HRB	()	(feet)							
R9-459713-00	641758	4	TR	18	4	16	13	19	10	5	3	1	1					Good				54		1585										
R9-459714-00	641758	4	TR	18	4	16	13	19	10	5	3	1	1					Good				54		1457										
R9-459715-00	641513	5	TR	18	9	18	12	17	15	1	6	1	1					Good				48		1375										
R9-459716-00	641513	5	TR	18	9	18	12	17	15	1	6	1	1					Good				48		1473										
R9-459717-00	641756	5	TR	20	12	19	12	18	19	1	7	1	1					Good				48		1631										
R9-459718-00	641756	5	TR	20	12	19	12	18	19	1	7	1	1					Good				48		1093										
R9-459719-00	641756	5	TR	20	12	19	12	18	19	1	7	1	1					Good				50		1562										
R9-459720-00	641756	5	TR	20	12	19	12	18	19	1	7	1	1					Good				50		1535										
R9-460380-00	641761	4	TR	20	13	17	12	18	25	5	8	1	1					Good				50		1581										
R9-460381-00	641758	4	TR	18	4	16	13	19	10	5	3	1	1					Good				49		1562										
R9-460382-00	641758	4	TR	18	4	16	13	19	10	5	3	1	1					Good				49		1503										
R9-461458-00	642309	2	TR	18	10	20	11	17	19	1	6	1	1					Good				48		1785										

PA: 227181
IN: 55031MD009

YIELD	GAUGE LENGTH (G.L.)	PLASTIC STRAIN RATIO (r)	IMPACT TEST	CARBON EQUIVALENT VALUE (CE)
(A)=0.2% PROOF STRESS	(A)=200mm (C)=80mm (E)=2"	(A)=0 (C)=45	(A)=10mm x 10mm	(A)=C+Mn/8
(B)=LOWER YIELD STRESS	(B)=50mm (D)=5.657 So (F)=8"	(B)=90 (D)=(r0+90+245) / 4	(B)=7.5mm x 10mm	(B)=C+Mn/8+(Cr+V+Mo)/5+(Cu+Ni)/15
			(C)=5mm x 5mm	(C)=C+Mn/8+Si/24
			(D)=2.5mm x 10mm	(D)=
			(E)=5mm x 10mm	

WE HEREBY CERTIFY THAT THE MATERIAL DESCRIBED HEREIN HAS BEEN TESTED AND INSPECTED
WITH SATISFACTORY RESULTS IN ACCORDANCE WITH THE REQUIREMENTS OF THE ABOVE SPECIFICATION

APPROVED Satish Misra
QC METALLURGIST

16 ga ~s

POA 146, 267, 245,

P51031MD009-1 T M INDUSTRIAL (P50323DI001.641756)



New Zealand Steel Limited
Glenbrook, South Auckland
Postal: Private Bag 92121, Auckland, New Zealand
Telephones: (09) 375 8999 / 375 8111 Auckland
(09) 235 8869 / 235 3535 Wairakei
Fax: (09) 375 8959

TEST CERTIFICATE

Ref: 5379/23650

CUSTOMER	Willkinson	P50505DI002	SPECIFICATION	ASTMA1008 CS Type A	Reissued 22/8/2005																										
CUSTOMER O/N	90-21N-742		PRODUCT	CRA WIDE COIL	CERTIFICATE No TC116858																										
MILL O/N	486968		DIMENSIONS	0.033" x 48" x Coil	PAGE 1 of 1																										
PACK NUMBER	HEAT No	CHEMICAL COMPOSITION PERCENT										MECHANICAL TESTS (TEST SPECIFICATION - ASTMA370)																			
		C	Si	Mn	P	S	Cu	Ni	Cr	Mo	V	Nb	Ti	Al	B	N2	CE ()	BEND	YIELD	T.S.	%ELONG G.L.=	HARDNESS HRB	r ()	LENGTH (feet)							
		x100										x1000																			
R9-466080-00	845423	6	TR	21	11	16	17	20	16	2	3	1	3					180°													
R9-466081-00	845423	6	TR	21	11	16	17	20	16	2	3	1	3					Good				50		2700							
R9-466082-00	845253	6	1	21	10	12	28	30	15	2	3	1	3					Good				50		2700							
R9-466083-00	845253	6	1	21	10	12	28	30	15	2	3	1	3					Good				47		2651							
																						47		2651							

SO-01-05

YIELD	GAUGE LENGTH (G.L.)	PLASTIC STRAIN RATIO (r)	IMPACT TEST	CARBON EQUIVALENT VALUE (CE)
(A)=0.2% PROOF STRESS	(A)=200mm (C)=80mm (E)=2"	(A)=r0 (C)=r45	(A)=10mm x 10mm (B)=7.5mm x 10mm	(A)=C+Mn/6 (B)=C+Mn/6+(Cr+V+Mo)/5+(Cu+Ni)/15
(B)=LOWER YIELD STRESS	(B)=50mm (D)=5.65 ± 30 (F)=8"	(B)=r90 (D)=(r0+r90+2r45)/4	(C)=5mm x 5mm (D)=2.5mm x 10mm (E)=5mm x 10mm	(C)=C+Mn/6+Si/24 (D)=

WE HEREBY CERTIFY THAT THE MATERIAL DESCRIBED HEREIN HAS BEEN TESTED AND INSPECTED WITH SATISFACTORY RESULTS IN ACCORDANCE WITH THE REQUIREMENTS OF THE ABOVE SPECIFICATION

APPROVED *Satish Misra*
QC METALLURGIST

2094 ~5

PORT 267, 146,